

Notice of Allowability

Application No.

10/696,632

Examiner

Thanhha Pham

Applicant(s)

HOVEL ET AL.

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/04/2004 and interview dated 03/26/2005 & 03/27/2005.
2. ☒ The allowed claim(s) is/are 10-27.
3. ☒ The drawings filed on 04 March 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 01/16/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


CARL WHITEHEAD, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Steven Fischman on 05/26/2005 and 05/27/2005.

The application has been amended as follows:

- Cancel non-elected claims 1-9 and 28-35
- In claim 10,
 - line 8, after "structure" insert – for said source and drain metal electrodes –
 - line 13, change "the entire Si surface" to – an entire Si surface of said Si substrate over which said buried oxide, said semiconductor layer, said gate insulator, said source and drain metal electrodes, and said gate electrode are located –
 - line 17, change "layers" to – layer –
- In claim 12,
 - line 1, change "a protective layer" to – the protective layer –
- In claim 13,
 - line 1, change "10" to – 12 –
- In claim 20,
 - line 7, after "structure" insert – for said source and drain metal electrodes –

line 12, change "the entire Si surface" to – an entire Si surface of said Si substrate over which said buried oxide, said strained Si layer on said SiGe layer, said gate insulator, said source and drain metal electrodes, and said gate electrode are located –

- In claim 22,

line 1, change "a protective layer" to – the protective layer –

Allowable Subject Matter

1. Claims 10-27 are allowed.
2. The following is an examiner's statement of reasons for allowance: Recorded Prior Art fails to disclose or suggest the combination of the process steps for fabricating double gate FET test structures for electrical evaluation of a semiconductor layer on a buried oxide on a Si substrate as recited in the base claims 10 and 20 comprising: depositing source and drain metal electrodes on the gate insulator in geometric pattern including depositing a first metal electrode layer from the group consisting of Al, Er, Gd, Nd, Ti and Y followed by depositing a second metal layer from the group consisting of Ag, Al, Au, Cr, Cu, Mg, Ni and Pt to form an electrode structure for said source and drain metal electrodes; depositing a gate electrode between the source and drain metal electrode without contacting the source and drain metal electrodes; depositing a protective layer over an entire Si surface of said silicon substrate over which said buried oxide, said semiconductor layer, said gate insulator, said source and drain metal electrodes, and said gate electrode are located; creating individual isolated mesas of

the protective layer to form a protective mask layer on the Si surface with the source, drain and gate electrodes residing within the boundaries of the mesas; removing the gate insulator and the semiconductor layer/the strained Si and the SiGe layers from regions

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhha Pham whose telephone number is (571) 272-1696. The examiner can normally be reached on Monday and Thursday 9:00AM - 9:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thanhha Pham